



Media release

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## When noise and even a breeze can cause unbearable pain

A little-known condition that causes debilitating pain after an original injury has healed, and that is often made worse by stimuli including noise, is the subject of new research funded by the Australian and New Zealand College of Anaesthetists.

Complex Regional Pain Syndrome (CRPS) may develop after injury to a nerve or after injuries such as a fracture or a sprain. Instead of healing progressing normally, pain increases and may spread away from the injured site.

In the early stages the affected limb is often abnormally warm and dry or sweaty, and hair, skin and nail growth may change. In addition, muscle weakness, tremor, and other movement disturbances may develop. Later on, the limb typically becomes cold and is extremely sensitive to light touch and to minor changes in the environment.

Anaesthetist and pain medicine specialist Adjunct Professor Philip Finch with psychologist Professor Peter Drummond, both from Murdoch University in Western Australia, are attempting to better understand why experiencing noise and even vibration can make the suffering of a person with CRPS even worse.

“We know that noise aggravates pain in CRPS,” Professor Drummond said.

“It’s difficult for other people to understand what these patients are experiencing. They report that “just about anything makes their pain worse” but this is often seen to be an overreaction ... people don’t recognise that there is a neurological or biological reason for their intense reaction to stimuli .”

Dr Finch said by the time a patient with CRPS presents for medical help they may be at their wits’ end and have developed florid psychological features.

In one of the world’s first studies in this area, the team of researchers is asking people about their experience of pain but also investigating the interaction between auditory processing (the way we interpret sound) and pain processing in the brain.

“We hope to better understand the central nervous system mechanisms of sound processing and how the experience of pain itself might have an effect on that processing.”

The research has received funding from the Anaesthesia and Pain Medicine Foundation of the Australian and New Zealand College of Anaesthetists.

“The concept to be tested in this project provides a more appealing explanation for these anomalies – namely, that failure of the brain to adequately suppress pain distorts normal sensory processing in

CRPS. Consequently, patients may learn to avoid stimuli such as stress and noise that make symptoms worse. Although it might appear from an outsider's perspective that the patient is exaggerating their condition and even making matters worse, in reality the patient may have few other options for keeping their pain within tolerable limits."

The Anaesthesia and Pain Medicine Foundation of ANZCA supports research projects across the fields of anaesthesia and pain medicine. ANZCA established the Anaesthesia and Pain Medicine Foundation in 2007 to support medical research and education.

For further information or for interviews, please contact ANZCA Media Manager Ebru Yaman on +61 3 8517 5303, +61 408 259 369 or email [eyaman@anzca.edu.au](mailto:eyaman@anzca.edu.au). Follow us on Twitter: @ANZCA